

ABSTRACT

Aim:

To evaluate the expression of the immunohistochemical markers Annexin A1 and Ki-67 in histologically negative margins of surgically treated Oral squamous cell carcinoma (OSCC) cases with and without local recurrences.

Materials and Methods:

Specimens for the study will be selected from the archives of Department of Oral and Maxillofacial pathology, Vivekanandha Dental College for Women, Tiruchengode. 20 Specimens/tissue blocks of surgically treated OSCC cases histopathologically diagnosed as well, moderate and poorly differentiated with their negative margins and 10 normal buccal mucosa were selected. One section will be stained with haematoxylin and eosin, and the other two will be immunohistochemically stained with Annexin A1 and Ki-67 markers. The analysis of Annexin A1 and Ki-67 expression will be carried out on the basis of the percentage of cells showing staining in the different layers of the oral mucosa. Score 0 = no staining or unspecific staining of tumor cells; Score 1 = weak (intensity) and incomplete staining (quality) of more than 10% - 30% of tumor cells (quantity); Score 2 = moderate and complete staining of more than 30% -60% of tumor cells; Score 3 = strong and complete staining of more than 60% of tumor cells. After recording the data, expression of Annexin A1 and Ki 67 in surgically treated OSCC cases and their negative margins with and without local recurrence will be compared and statistically analysed using Chi-square test.

Results:

On comparison of negative margins of recurrent and non-recurrent OSCC cases, a P-value of 0.0041 is obtained which is found to be more significant. On analyzing the tumor proper region between the pathologically differentiated grades of OSCC cases a significant P-value

(0.041) is obtained. Annexin A1 expression decreased significantly as neoplasia progressed in OSCC cases. On comparison between the negative margins of recurrent and non-recurrent OSCC cases a P-value of <0.0001 is obtained which is found to be more significant. A significant P-value (0.041) is obtained between the pathological differentiated grades of OSCC. Expression of Ki-67 increased significantly as neoplasia progressed in OSCC cases.

Conclusion:

Anti-proliferative activity of Annexin A1 and proliferative activity of the Ki-67 nuclear antigen has been linked and investigated whether their expression can be of clinical use for prediction of locoregional recurrence exclusively in primary OSCC. The results of this study provide data on Annexin A1 and Ki-67 expression in the tumor proper region and histopathologically negative margins of well and moderately differentiated OSCC cases with and without local recurrence. Thus by predicting the local recurrence, surgeons can be intimated for wide local excision, thereby preventing treatment failures and benefiting the patients.

